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EXAMINER	
HERRERA, DIEGO D	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
12/02/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/646,230	CHEN, SHAO-CHUN	
	Examiner	Art Unit	
	DIEGO HERRERA	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Response to Amendment

Claims 1, 16, 18 and 22 have been amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sahinoja et al. (US 20030204640 A1), and in view of Aghera et al. (US 20040098715 A1).

Regarding claim 1. a mobile services network (abstract, fig. 1, 5; client 30, paragraph 51; Sahinoja et al. shows network and mobile terminals) comprising:

a mobile electronic device (mobile terminal fig. 5 element 30, Sahinoja et al. shows mobile device);

an update package repository (¶: 13, Sahinoja et al. teaches server sending update package to mobile terminals, hence, update package repository);

Management server (abstract, Sahinoja et al. teaches management server),

generator with nodes preprocessor, which generates a package of update information (¶: 16-19, fig. 4; Sahinoja et al. teaches hierarchical structure of a plurality of nodes and generating section of response to be transmitted); and

however, Sahinoja does not discloses wherein generating comprises predicting the contents of locations in a new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware, and identifying as nodes corresponding locations in the old version of firmware for the mobile electronic device and the new version of firmware for the mobile electronic device, for which contents of the location in the new version of firmware was not predicted; nevertheless, Aghera et al. teaches generating comprises predicting the contents of locations in a new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware (¶: 57-59, Aghera et al. teaches blocks are set for DSP Patch Version for a particular patch followed by memory address of DSP Patch Data for that particular patch, as shown in Fig. 10), and identifying as nodes corresponding

locations in the old version of firmware for the mobile electronic device (¶: 58-60, Aghera et al. teaches loading information in said memory of device by loader) and the new version of firmware for the mobile electronic device (¶: 58-60, Aghera et al. teaches loading information in said memory of device by loader), for which contents of the location in the new version of firmware was not predicted (¶: 65, Aghera et al. teaches setting up patch block to insure that the patch installation). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention of Sahinoja et al. to specifically include the teachings of Aghera et al. for the purposes of updating firmware in mobile device through block or node modification.

Regarding claim 16. a method for generating an update package stored in a computer readable medium using an old image and a new image of a firmware in a mobile services network, the method comprising:

converting symbols in the new and old images of the firmware into distance information (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device);

determining a list of nodes in the old and new images of the firmware (¶: 23, Sahinoja et al. teaches a plurality nodes in a hierarchical structure of information);

generating filter information (¶: 19-20, Sahinoja et al. teaches filter information being generated);

generating the update package to be stored in a computer readable medium (¶: 16-19, fig. 4; Sahinoja et al. teaches hierarchical structure of a plurality of nodes and generating section of response to be transmitted); and

outputting the generated update package (¶: 16-19, fig. 4; Sahinoja et al. teaches hierarchical structure of a plurality of nodes and generating section of response to be transmitted);

however, Sahinoja does not discloses wherein determining comprises predicting the contents of locations in the new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware, and identifying as nodes corresponding locations in the old image of firmware and the new image of firmware for which contents of the location in the new image of firmware was not able to be predicted; nevertheless, Aghera et al. teaches wherein determining comprises predicting the contents of locations in the new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware (¶: 57-59, Aghera et al. teaches blocks are set for DSP Patch Version for a particular patch followed by memory address of DSP Patch Data for that particular patch, as shown in Fig. 10), and identifying as nodes corresponding locations in the old image of firmware and the new image of firmware for which contents of the location in the new image of firmware was not able to be predicted (¶: 65, Aghera et al. teaches setting up patch block to insure that the patch installation). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention of Sahinoja et al. to specifically include

the teachings of Aghera et al. for the purposes of updating firmware in mobile device through block or node modification.

wherein generating filter information comprises capturing information regarding addresses where the contents of the location in the new image of firmware was able to be predicted (¶: 10, 12, 20, 23-25, Sahinoja et al. teaches address management for nodes and software updates).

Regarding claim 22. a method for generating an update package to be stored in a computer readable medium using an old image and a new image of a firmware for a mobile electronic device in a mobile services network, the method comprising the steps of:

converting symbols in the new and old images of the firmware into distance information (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device); determining a list of nodes in the old and new images of the firmware (¶: 23, Sahinoja et al. teaches a plurality nodes in a hierarchical structure of information).

generating information for a first filter (¶: 19-20, Sahinoja et al. teaches filter information being generated); creating a partially modified old image of the firmware utilizing the first filter; generating information for a second filter (¶: 24, Sahinoja et al. teaches through management related information generating partially, from gathered information, section information in a node in the hierarchical structure for modification); creating a modified old image of the firmware utilizing the second filter and the partially modified old image of the firmware; generating the update package to be stored

in a computer readable medium (¶: 24, Sahinoja et al. teaches through management related information generating partially, from gathered information, section information in a node in the hierarchical structure for modification, furthermore, this done throughout the structure of plurality of nodes...the management system has memory therefore having a computer readable medium as seen in figure 5); outputting the generated update package (fig. 5 shows communication between the management device and the mobile terminal or client device); and

however, Sahinoja et al. does not discloses wherein determining comprises predicting the contents of locations in the new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware, nevertheless, Aghera et al. teaches wherein determining comprises predicting the contents of locations in the new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware (¶: 57-59, Aghera et al. teaches blocks are set for DSP Patch Version for a particular patch followed by memory address of DSP Patch Data for that particular patch, as shown in Fig. 10).

identifying as nodes corresponding locations in the old image of firmware (¶: 58-60, Aghera et al. teaches loading information in said memory of device by loader) and the new image of firmware for which contents of the location in the new image of firmware was not able to be predicted based upon the old image of firmware (¶: 65, Aghera et al. teaches setting up patch block to insure that the patch installation).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention of Sahinoja et al. to specifically include the teachings of Aghera et al. for the purposes of updating firmware in mobile device through block or node modification.

Consider claim 2. The network according to claim 1, wherein the generator with nodes preprocessor generates update packages by comparing an old version and a new version of firmware (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device).

Consider claim 3. The network according to claim 2, wherein the update packages are populated into the update package repository (¶: 19-23, Sahinoja et al. teaches management system to replace nodes of information in memory of mobile device).

Consider claim 4. The network according to claim 2, wherein the generated update packages incorporate filter information (¶: 17-23; Sahinoja et al. teaches filter information).

Consider claim 5. The network according to claim 2, wherein the generated update packages incorporate node information (¶: 14-16, 19, Sahinoja et al. teaches node information in update packages).

Consider claim 6. The network according to claim 1, wherein the management server and the update package repository are communicatively coupled (¶: 17-19, 50-52; Sahinoja et al. teaches management and update package are interacting with each other).

Consider claim 7. The network according to claim 1, wherein the generator with nodes preprocessor and the update package repository are communicatively coupled (¶: 16-19, Sahinoja et al. teaches a management system wherein nodes are pre-process and generated with update package repository, hence communicatively coupled).

Consider claim 8. The network according to claim 1, wherein the generator with nodes preprocessor is located at a remote location from the update package repository (Sahinoja et al. discloses the claimed invention except for having the generator with nodes preprocessor located at a remote location from the update package repository. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have the generator with nodes preprocessor located at a remote location from the update package repository, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70).

Consider claim 9. The network according to claim 1, wherein the mobile electronic device comprises:

a non-volatile memory (¶: 32, Aghera et al. teaches flash memory in mobile terminal, which is to say non-volatile memory, which all mobile electronic devices have nowadays);

a random access memory ((¶: 32, Aghera et al. teaches flash memory in mobile terminal, which is to say non-volatile memory, which all mobile electronic devices have nowadays); and

security services (¶: 76, Sahinoja et al. teaches authentication process between the client device and the DM).

Consider claim 10. The network according to claim 9, wherein the non-volatile memory comprises: an update agent (fig. 5 element 320 client DM Agent, Sahinoja et al. teaches update agent in mobile terminal); a firmware (¶: 15-16, 33, Sahinoja et al. teaches software update) and real-time operating system (¶: 38, Aghera et al. teaches device communicating with management system, doing operations in real-time hence having an operating system); a download agent (fig. 5 element 320, Sahinoja et al. teaches client DM agent with SyncML DM protocol section for downloading information); and a boot initialization (¶: 36, Aghera et al. teaches reboot after firmware update, hence, boot initialization).

Consider claim 11. The network according to claim 10, wherein the non-volatile memory further comprises an operating system layer (¶: 32, Aghera et al. teaches flash memory in mobile terminal, which is to say non-volatile memory, which all mobile electronic devices have nowadays).

Consider claim 12. The network according to claim 10, wherein the non-volatile memory further comprises an end-user-related data and content unit (fig. 5, client device 30, elements 300 and 320, Sahinoja et al. teaches content unit since the DM tree contains nodes of information of the user related data…see reference for more details).

Consider claim 13. The network according to claim 10, wherein the mobile electronic device executes an update process according to the following:

downloading an update package from the update package repository (fig. 5, Sahinoja et al. teaches downloading update package from repository to client); rebooting (¶: 36, Aghera et al. teaches reboot after firmware update, hence, boot initialization); executing the boot initialization (¶: 36, Aghera et al. teaches reboot after firmware update, hence, boot initialization); determining whether an update process is needed (¶: 57, Sahinoja et al. teaches mobile terminal determines if session is needed); and invoking the update agent (¶: 57, Sahinoja et al. teaches communicating with server client management for updates).

Consider claim 14. The network according to claim 13, wherein the mobile electronic device determines the need for an update process based on status information (¶: 57, Sahinoja et al. teaches mobile terminal determines if session is needed).

Consider claim 15. The network according to claim 13, wherein the mobile electronic device invokes the update agent to execute the update process if it is determined an update process is needed (¶: 57, Sahinoja et al. teaches communicating with server client management for updates).

Consider claim 17. The method according to claim 16 wherein the distance information is determined by locating the symbols of the old image and the new image (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device).

Consider claim 18. The method according to claim 16 wherein the determining comprises:

determining addresses of symbols in the old image (¶: 16, 20-24, Sahinoja et al. teaches determining addresses of symbols in software in mobile terminal);

determining addresses of corresponding symbols in the new image (¶: 20-21, Sahinoja et al. teaches relating information to hierarchical structure of a plurality of nodes connected to the selected node);

comparing the differences in the addresses of the corresponding symbols in the old image and the new image (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device);

predicting differences in addresses of subsequent symbols based on the differences in the addresses of previous symbols (¶: 57-59, Aghera et al. teaches blocks are set for DSP Patch Version for a particular patch followed by memory address of DSP Patch Data for that particular patch, as shown in Fig. 10);

determining the symbols for which offsets cannot be predicted (¶: 65, Aghera et al. teaches setting up patch block to insure that the patch installation); and

using the unpredictable symbols as additional node symbols (¶: 58-60, Aghera et al. teaches loading information in said memory of device by loader).

Consider claim 19. The method according to claim 16, Criss et al. discloses wherein a pre-predict phase is performed to generate filter information, and wherein the pre-predict phase comprises:

identifying instructions using instruction prediction (fig. 4, ¶: 110-111, 114-116, Sahinoja et al. teaches exploration of nodes identifying nodes or instructions, hence, instruction prediction upon request);

fixing address locations and producing filter information (¶: 117-119, Sahinoja et al. teaches filter information produce after determining address locations); and

fixing data and producing filter information using block hunting (abstract, ¶: 120-124, Sahinoja et al. teaches updating data blocks or nodes that have been identified by address as needed to update).

Consider claim 20. The method according to claim 16 wherein the filter information comprises node location (¶: 117-119, Sahinoja et al. teaches filter information produce after determining address locations) and address range information where prediction was successful (¶: 109-110, Sahinoja et al. teaches address identification).

Consider claim 21. The method according to claim 16, wherein a pre-predict phase is performed to generate filter information (¶: 117-119, Sahinoja et al. teaches filter information produce after determining address locations), and wherein the pre-predict phase is followed by a predict phase, wherein the predict phase comprises:

performing instruction prediction utilizing the generated filter information (fig. 4, ¶: 110-111, 114-116, Sahinoja et al. teaches exploration of nodes identifying nodes or instructions, hence, instruction prediction upon request); and

executing block hunting utilizing the generated filter information (abstract, ¶: 120-124, Sahinoja et al. teaches updating data blocks or nodes that have been identified by address as needed to update).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEGO HERRERA whose telephone number is (571)272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Herrera/

Examiner, Art Unit 2617

/LESTER KINCAID/

Supervisory Patent Examiner, Art Unit 2617